

31. vector and the first color values being converted.

32. 7-8. (Twice Amended) A color characterization method for characterizing a color imaging system, the method comprising:

obtaining [generating] first color values representing [in a color coordinate system by using] output samples of the color imaging system[, the first color values representing colors of the output samples];

converting the first color values into second color values in a device-independent color coordinate system using a white reference vector and a black reference vector;

calculating the [a] black reference vector as a function of an output [a] medium associated with the color imaging system [on which the output samples are formed];

calculating the white reference vector using the black reference vector; and

adjusting the white reference vector using the first color values being converted.

33. 16-17. (Twice Amended) For use in characterizing a color imaging system, a color characterization arrangement comprising:

means for obtaining [generating] first color values representing [in a color coordinate system by using] output samples of the color imaging system[, the first color values representing colors of the output samples]; [and]

means for converting the first color values into second color values in a device-independent color coordinate system using a white reference vector and a black reference vector; and [.]

adjusting the white reference vector [being adjusted] using the black reference vector and the first color values being converted.

17. 18. (Twice Amended) For use in characterizing a color imaging system, a color characterization arrangement comprising:

a computer arrangement, configured and arranged to receive first color values in a color coordinate system, the first color values representing [colors of] output samples of the color imaging system; and

a first memory, responsive to the computer arrangement and configured and arranged to store second color values in a device-independent color coordinate system,

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the computer arrangement being further configured and arranged to convert the first color values into the second color values using a white reference vector and a black reference vector, and to adjust the white reference vector [being adjusted] using the black reference vector and the first color values being converted.

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20 22. (Twice Amended) A color characterization arrangement, according to claim ¹⁷18 [19], wherein the computer arrangement is further configured and arranged to define the black reference vector using maximum values in color channels of the color imaging system.

30 34. (Twice Amended) For use in characterizing a color imaging system, a data storage medium storing a computer-executable program configured and arranged to, when executed,

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obtain first color values representing [in a color coordinate system by using] output samples of the color imaging system, [the first color values representing colors of the output samples, and]

convert the first color values into second color values in a device-independent color coordinate system using a white reference vector and a black reference vector, and adjust the white reference vector [being adjusted] using the black reference vector and the first color values being converted.

43 49. (Twice Amended) A color transformation method for performing a color transformation between first and second color imaging systems, the color transformation method comprising:

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generating first and second color values [by using output samples of the first and second color imaging systems, the first and second color values] respectively representing [colors of the] output samples of the first and second color imaging systems;

converting the first and second color values respectively into third and fourth color values using a device-independent color coordinate system;

calculating a black reference vector from a medium on which the output samples are formed and a white reference vector from the black reference vector;

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adjusting the white reference vector using the first and second color values being converted; and
generating color transformation values using the third and fourth color values.

5157. (Twice Amended) For use in performing a color transformation between first and second color imaging systems, a color transformation arrangement comprising:
means for obtaining [generating] first color values representing [by using] output samples of the first color imaging system[, the first color values representing colors of the output samples of the first color imaging system];
means for generating second color values representing [by using] output samples of the second color imaging system[, the second color values representing colors of the output samples of the second color imaging system];
means for converting the first color values into third color values using a device-independent color coordinate system;
means for converting the second color values into fourth color values using the color coordinate system;
means for calculating a black reference vector from a medium on which the output samples are formed and a white reference vector from the black reference vector;
means for adjusting the white reference vector using the first and second color values being converted; and
means for generating color transformation values using the third and fourth color values.

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5158. (Amended) A method for characterizing a color imaging system, the method comprising:
obtaining first color values representing output of the system;
converting the first color values to second color values using a white reference vector
for the system; and
adjusting the white reference vector as a function of both a black reference vector for the system and the first color values being converted.
